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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/654,988	09/05/2003	Masatoshi Yoshikawa	242454US2SRD	6689

22850 7590 12/14/2005

OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C.
1940 DUKE STREET
ALEXANDRIA, VA 22314

EXAMINER

HEINZ, ALLEN J

ART UNIT	PAPER NUMBER
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2653

DATE MAILED: 12/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/654,988

Applicant(s)

YOSHIKAWA ET AL.

Examiner

A. J. HEINZ

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-7, 14 and 15 is/are allowed.
- 6) ☒ Claim(s) 8, 9, 11-13, 16 and 17 is/are rejected.
- 7) ☒ Claim(s) 10 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>9/5/03&12/21/04</u> | 6) <input type="checkbox"/> Other: ____ |

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1. Pursuant to 37 CFR 1.75(g), applicant should attempt to organize the presentation of claims in an application with the least restrictive [broadest] claim(s) being presented earliest in the presentation of claims, and all dependent claims grouped together with the claim or claims to which they refer to the extent possible.

2. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

The Title should provide a more detailed structural identification of the feature or features which distinguish the invention from the prior art.

The intended results produced by the structural differences can also be part of the content of the Title but should be made subordinate to the structural differences.

3. Figures 10,11&16 should be designated by a legend such as -
-Prior Art-- because only that which is old is illustrated. See
MPEP §608.02(g).

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4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. §102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 8,9,11-13,16&17 are rejected under 35 U.S.C. §102(b) as being anticipated by Gill(PN 6185080).

Gill discloses a magnetoresistive film in figure 13 between electrodes 80&82. Magnetoresistive film comprising first magnetization free layer 205; a second magnetization free layer 235; a first magnetization pinned layer 217; second magnetization pinned layer 227; first nonmagnetic intermediate layer 210 and second nonmagnetic intermediate layer 228.

All of the required features of the last two sub-paragraphs of claim 8 are captured by Gill's embodiment of figure 13.

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Note, that the magnetizations of the pinned layers are detailed in Gill, col.6, lines 59-67 and col.7, lines 1-10 with one antiferromagnetic layer 220 exchange coupling with the magnetization pinned layers.

Re limitations directed to the dimensions of the films are all nominally within the known manufacturing limits for thin film structures.

6. Claims 1-7,14&15 are allowed.

7. Claim 10 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Huai and Gill(PN 6185079 and 6633461 show various thin film sensors.

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9. For a complete response applicant should identify how the claimed structure of his invention defines over **all** the art of record.

Moreover, where the applicant disagrees with the reasoning and/or application of the prior art on critical points of the claims, they should identify how the claimed structure of their invention defines over **all** the art of record not just the applied art.

Where applicant believes that the art is redundant and/or superfluous relative to the critical aspects of the claimed invention the applicant may simply state so in rebuttal summary.

10. If applicant has filed an information disclosure statement and this instant office action does not contain an initialed-off copy (or copies) of all such filed IDS's (or at least a comment to the disposition of such IDS'S in the body of the office action itself) applicant should apprise the examiner of such missing documentation [to the IDS's] in response to this office action so that the examiner can take appropriate action to supply same to the applicant.

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11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to A. J. HEINZ whose telephone number is (571) 272-7587. The examiner can normally be reached on M-F 9:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, WILLIAM KORZUCH can be reached on (571)272-7589.

The fax phone number for the organization where this application or proceeding is assigned is (571)273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A. J. HEINZ
Primary Examiner
Art Unit 2653

A handwritten signature in cursive script, appearing to read "A. J. Heinz", written over a horizontal line.